

In the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-15 (Canceled)

Please enter the following claims:

- 1 16. **(New)** A method for supplying routing Instructions to subscribers upon
- 2 request comprising:
- 3 providing a processor storing at least one subscriber-specific matrix, each
- 4 matrix comprising a plurality of routes from a first coordinate to a second
- 5 coordinate, each route comprising a plurality of segments;
- 6 receiving an input from a subscriber indicative of subscriber identity and a
- 7 routing code;
- 8 associating the routing code to one stored subscriber specific matrix;
- 9 selecting the at least one matrix, consisting of potential routes, associated
- 10 with the routing code transmitted by the subscriber;
- 11 receiving input information from a plurality of mobile transmitters indicative of
- 12 flow conditions in selected segments, each mobile transmitter traveling on a
- 13 segment;
- 14 analyzing maximum flow conditions in each path in the selected matrix by
- 15 applying a path computation algorithm across the matrix;
- 16 determining a selected a route in accordance with a maximum flow rule; and
- 17 transmitting to the subscriber a signal indicating the selected route.

1 17. **(New)** A method according to claim 16, wherein analyzing comprises
2 utilizing the Ford-Fulkerson algorithm.

1 18. **(New)** A method according to claim 16, wherein analyzing comprises
2 utilizing the Dijkstra algorithm.

1 19. **(New)** A method according to claim 16, wherein receiving an input
2 from the subscriber further comprises processing successive inputs indicative of
3 location to determine speed and direction of the subscriber.

1 20. **(New)** A method according to claim 19, wherein the mobile
2 transmitters each comprise a global positioning system locator, and wherein
3 receiving input information further comprises receiving a transmitter ID code and
4 a location parameter from each mobile transmitter, and computing speed and
5 direction information based on first and second inputs from a mobile transmitter.

1 21. **(New)** A method according to claim 20, wherein providing a stored
2 matrix comprises providing stored records, each record representing routing
3 segments, and containing at least a beginning point of one segment expressed
4 as longitude and latitude and an endpoint of the segment expressed as longitude
5 and latitude, and wherein receiving input information indicative of flow conditions
6 in selected segments comprises providing a data field for the segment direction;
7 and providing a data field for the average velocity measured in a direction of the
8 segment.

1 22. **(New)** A method according to claim 19, wherein transmitting to the
2 subscriber a signal indicating the selected route comprises producing an n-bit
3 word for transmission containing data indicative of at least:

4 a beginning point of the segment expressed as longitude and latitude,
5 an endpoint of the segment expressed as longitude and latitude,
6 a Bezier descriptor of the segment;
7 a data field indicative of geographic direction of the segment; and
8 a data field for the average velocity measured in the direction of the
9 segment.

1 23. **(New)** A method according to claim 22, wherein producing the n-bit
2 word further comprises producing data indicative of average velocity measured in
3 selected lanes of the segment in one direction and average velocity measured in
4 a direction opposite to the direction of the segment.

1 24. **(New)** A method according to claim 20, wherein transmitting to the
2 subscriber a signal indicating the selected route comprises producing an n-bit
3 word for transmission containing data indicative of at least average speed
4 measured in the segment in the one direction during a selected calendar period.

1 25. **(New)** A method according to claim 24, wherein transmitting to the
2 subscriber a signal indicating the selected route comprises producing an n-bit
3 word for transmission containing data indicative of at least average speed
4 measured in the segment in the direction during a selected one month span and
5 during a selected one year span.

1 26. **(New)** A method according to claim 22, wherein transmitting to the
2 subscriber a signal indicating the selected route comprises producing an alert
3 signal for transmission in response to an indication that average speed measured
4 in the segment in the direction is below a preselected level.

1 27. **(New)** A method according to claim 16 further comprising transmitting
2 data to a traffic control system.

1 28. **(New)** A system for supplying routing Instructions to subscribers upon
2 request comprising:

3 a processor to store at least one subscriber-specific matrix, each said matrix
4 comprising a plurality routes from a first coordinate to a second coordinate,
5 each route comprising a plurality of segments;

6 a receiver to receive an input from a subscriber indicative of subscriber
7 identity and a routing code and to receive inputs indicative of flow conditions
8 from mobile transmitters each in a segment;

9 a processor to associate the routing code to one stored subscriber specific
10 matrix, said processor selecting said at least one matrix associated with the
11 routing code transmitted by the subscriber;

12 said processor analyzing maximum flow conditions in each path in the
13 selected matrix by applying a path computation algorithm across the matrix
14 and determining a selected a route in accordance with a maximum flow rule;
15 and

16 a signal generator to provide an input to said transmitter to transmit to the
17 subscriber a signal indicating the selected route.

1 29. **(New)** A system according to claim 28, wherein said processor is
2 configured to utilize the Ford-Fulkerson algorithm.

1 30. **(New)** A system according to claim 28, wherein said processor is
2 configured to utilize the Dijkstra algorithm.

1 31. **(New)** A system according to claim 28, wherein said processor further
2 comprises means to process a transmitter ID code and a location parameter from
3 each mobile transmitter, and compute speed and direction information based on
4 first and second inputs from a mobile transmitter

1 32. **(New)** A system according to claim 31, wherein said processor
2 comprises means to store records, each record representing routing segments,
3 and containing at least a beginning point of one segment expressed as longitude
4 and latitude and an endpoint of the segment expressed as longitude and latitude,
5 and wherein input information indicative of flow conditions in each selected
6 segments is coupled to said processor to provide a data field for the segment
7 direction and a data field for the average velocity measured in a direction of the
8 segment.

1 33. **(New)** A system according to claim 32, wherein said processor
2 produces an n-bit word for transmission containing data indicative of at least:
3 a beginning point of the segment expressed as longitude and latitude,
4 an endpoint of the segment expressed as longitude and latitude,
5 a Bezier descriptor of the segment;
6 a data field indicative of geographic direction of the segment; and
7 a data field for the average velocity measured in the direction of the
8 segment.

1 34. **(New)** A method according to claim 32, further comprising a
2 comparator to produce an alert signal for transmission in response to an

3 indication that average speed measured in the segment in the direction is below
4 a preselected level.

1 35. **(New)** A system according to claim 32 further comprising an interface
2 to transmit data to a traffic control system.

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